

KIAA0100 siRNA (m): sc-146439

BACKGROUND

KIAA0100, also known as UPF0378 protein KIAA0100, antigen MLAA-22 or BCOX1, is a 2,235 amino acid secreted protein belonging to the UPF0378 family. Localizing to cytoplasm, KIAA0100 is expressed in pancreas and placenta and is up-regulated in breast carcinoma epithelial cells, ductal *in situ* carcinoma, invasive breast carcinoma and metastatic breast carcinoma cells. KIAA0100 exists as four alternatively spliced isoforms and is encoded by a gene that maps to human chromosome 17q11.2. Chromosome 17 makes up over 2.5% of the human genome with approximately 81 million bases encoding over 1,200 genes. Neurofibromatosis, a condition characterized by neural and epidermal lesions, dysregulated Schwann cell growth, Alexander disease, Birt-Hogg-Dube syndrome and Canavan disease are associated with chromosome 17.

REFERENCES

1. Song, J., Yang, W., Shih, I.e.M., Zhang, Z. and Bai, J. 2006. Identification of BCOX1, a novel gene overexpressed in breast cancer. *Biochim. Biophys. Acta* 1760: 62-69.
2. Nusbaum, R., Vogel, K.J. and Ready, K. 2006-2007. Susceptibility to breast cancer: hereditary syndromes and low penetrance genes. *Breast Dis.* 27: 21-50.
3. Zody, M.C., Garber, M., Adams, D.J., Sharpe, T., Harrow, J., Lupski, J.R., Nicholson, C., Searle, S.M., Wilming, L., Young, S.K., Abouelleil, A., Allen, N.R., Bi, W., Bloom, T., Borowsky, M.L., Bugalter, B.E., Butler, J., et al. 2006. DNA sequence of human chromosome 17 and analysis of rearrangement in the human lineage. *Nature* 440: 1045-1049.
4. Suela, J., Largo, C., Ferreira, B., Alvarez, S., Robledo, M., González-Neira, A., Calasanz, M.J. and Cigudosa, J.C. 2007. Neurofibromatosis 1, and not TP53, seems to be the main target of chromosome 17 deletions in *de novo* acute myeloid leukemia. *J. Clin. Oncol.* 25: 1151-1152.
5. Farrell, C.J. and Plotkin, S.R. 2007. Genetic causes of brain tumors: neurofibromatosis, tuberous sclerosis, von Hippel-Lindau, and other syndromes. *Neurol. Clin.* 25: 925-946.
6. Murakami, N., Tsuchiya, T., Kanazawa, N., Tsujino, S. and Nagai, T. 2008. Novel deletion mutation in GFAP gene in an infantile form of Alexander disease. *Pediatr. Neurol.* 38: 50-52.
7. Zhou, F.L., Zhang, W.G., Meng, X., Chen, G. and Wang, J.L. 2008. Bioinformatic analysis and identification for a novel antigen MLAA-22 in acute monocytic leukemia. *Zhongguo Shi Yan Xue Ye Xue Za Zhi* 16: 466-471.

CHROMOSOMAL LOCATION

Genetic locus: 2610507B11Rik (mouse) mapping to 11 B5.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

PRODUCT

KIAA0100 siRNA (m) is a target-specific 19-25 nt siRNA designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see KIAA0100 shRNA Plasmid (m): sc-146439-SH and KIAA0100 shRNA (m) Lentiviral Particles: sc-146439-V as alternate gene silencing products.

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

KIAA0100 siRNA (m) is recommended for the inhibition of KIAA0100 expression in mouse cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 μ M in 66 μ l. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor KIAA0100 gene expression knockdown using RT-PCR Primer: KIAA0100 (m)-PR: sc-146439-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.